

REMARKS

Status of the Claims

Claims 1, 2, 4, 5, and 18-21 are pending in the present application. Claim 1 is allowed. Claim 20 is withdrawn from consideration as directed to a non-elected invention. Claims 3 and 6-17 were previously canceled. Claim 18 is amended to depend from claims 1 or 2. Claim 18 is further amended to specify the term “comprises.” In addition, claim 18 is amended to cancel the subject matter described in parts a-d and f. The claims are amended without prejudice or disclaimer. No new matter is entered by way of the above amendment. Reconsideration is respectfully requested.

Claim Objections

Claims 4, 5, 19, and 21 remain objected to for allegedly depending from claim 2, a rejected base claim, *see Office Action*, December 9, 2008, page 2, (“Office Action”). For the reasons set forth below, Applicants submit that claim 2 is allowable. Accordingly, Applicants request withdrawal of the objections.

Claim 18 is also objected to for specifying that the DNA molecule consists of an amino acid sequence., *see Office Action*, page 3. As amended, claim 18 is directed to an isolated polynucleotide, hybridizing under stringent conditions of 1 x SSC, 0.1% SDS and 37 °C to at least one of the DNA of claim 1 or 2, wherein the DNA comprises a DNA encoding the amino acid sequence represented by SEQ ID NOS: 3 or 4 and consisting of at least 15 nucleotides. Accordingly, the claims no longer include the informalities to which the Examiner objects. Based upon the foregoing, Applicants respectfully request withdrawal of the objection.

Issues Under 35 U.S.C. § 112, Second Paragraph

Claims 2 and 18 remain rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite, *see Office Action*, pages 3-4. The Examiner states that claim 2 and claim 18 describe hybridization conditions without describing washing conditions, *see Office Action* of February 11, 2008, page 3. The Examiner alleges that it is unclear how to determine which DNA

molecule hybridizes to the described sequences without including specific washing conditions in the claims, *see Office Action* of February 11, 2008, page 3.

Applicants previously argued that during the hybridization process, a washing step is used to remove DNAs that should not hybridize under a specified condition, *see Office Action*, page 4. Applicants further stated that DNA, which hybridize under stringent conditions, refer to DNA which maintain hybridization when washed under the same conditions as the hybridization conditions. In response, the Examiner states that an ordinary artisan would recognize that the stringency of hybridization is affected by the stringency of the washes, *see Office Action*, page 4.

Applicants submit that the claims are not indefinite and are well-understood by an ordinary artisan. An ordinary artisan recognizes that the DNA specified in the instant claims does not encompass DNA, which does not inherently hybridize under the described stringent conditions. That is, the DNA encompassed by the claims describe DNA which maintain hybridization when the DNA is washed under the same conditions as the stringent hybridization conditions.

For example, when an ordinary artisan obtains DNA that hybridizes under stringent conditions, such as described in the instant claims, the ordinary artisan understands that hybridization is first performed under mild conditions and then washed under stringent conditions. As described in the present application, and as understood in the art, the determination of hybridization conditions of a desired DNA involves ascertaining the conditions that allow the desired DNA to be obtained without determining the washing conditions, *see, e.g., Current Protocols in Molecular Biology*,: Ausubel *et al.*, Eds. Wiley, New York, 1987. Accordingly, the meaning of the instant claims is clear to an ordinary artisan and Applicants respectfully request withdrawal of the rejection.

Issues Under 35 U.S.C. § 112, First Paragraph, Written Description

Claim 18

Claim 18 remains rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement, *see Office Action*, pages 4-5. In response to Applicants' previous argument, the Examiner states that the claim is directed to a polynucleotide

which hybridizes to the molecules of any of (a) through (f), each of which would have more than a single hybridizing species. According to the Examiner, the claim is broadly drawn to a large number of hybridizing polynucleotides. The Examiner further asserts that the claimed genus would contain a fair amount of variability because molecules which hybridize do not specifically bind to each and every residue of a sequence. Therefore, the Examiner believes that the structure of the hybridizing molecule would have significant variation.

Although Applicants do not agree with the Examiner, claim 18 is amended in an effort to expedite prosecution. The DNA described in amended claim 18 comprises a DNA encoding the amino acid sequence represented by SEQ ID NO: 3 or SEQ ID NO: 4. The claimed DNA have a low level of sequence homology to other similar DNA and consist of at least 15 nucleotides. DNA, which only encode amino acid sequences having low sequence homology with other similar sequences, are canceled from claim 18. Accordingly, the DNA encompassed by amended claim 18 specifically binds to the DNA of the present invention. Based upon the foregoing, the claims comply with the written description requirement. Withdrawal of the rejection is respectfully requested.

Claims 18 and 19

Claims 18 is further rejected and claim 19 is rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement, *see Office Action*, pages 6-7 . According to the Examiner, claims 18 and 19 allegedly describe new matter. Specifically, the Examiner states that part (f) of claim 18 is new matter.

In an effort to expedite prosecution, part (f) of claim 18 is canceled. Accordingly, the rejection is moot. Applicants respectfully request withdrawal of the rejection.

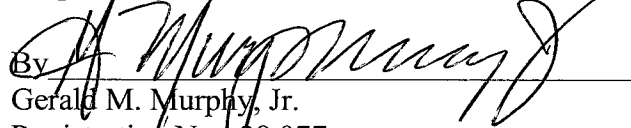
CONCLUSION

In view of the above amendments and remarks, Applicants believe the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Linda T. Parker, Reg. No. 46,046 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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